

Chapter 1

Introduction

1.1 Background

The Colorado River Basin encompasses approximately 244,000 square miles located in portions of seven states (i.e., Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming—collectively referred to as the Basin States¹). The Colorado River starts in the Rocky Mountains and traverses more than 1,400 miles to its terminus in the delta regions of the upper Gulf of California (Sea of Cortez) in Mexico. The Colorado River provides the water supply for more than 25 million people and about 3.5 million acres of agricultural lands in the United States and Mexico (Water Education Foundation 2001). A significant amount of the water demand (particularly for municipal use) is physically located outside the Colorado River Basin and is served by transbasin diversions and conveyances. Collectively, hydroelectric generation facilities in the Colorado River Basin can provide about 12 billion kilowatt hours of energy annually.

The Colorado River also serves as a significant source of water for recreational and environmental resources in the Basin States. The riverine corridor and associated historical floodplain compose a significant portion of the remaining aquatic, marsh, and riparian habitat that is vital to many different resident and migratory species.

The Colorado River Compact of 1922 divided the Colorado River into Upper and Lower Divisions and Upper and Lower Basins. The Upper Division States are Colorado, New Mexico, Utah, and Wyoming, and the Lower Division States are Arizona, California, and Nevada. The Lower Basin extends from Lee Ferry to the Southerly International Boundary (SIB) and is generally referred to as the lower Colorado River (LCR) (see Figure 1-1). Hoover Dam is the northernmost U.S. Department of the Interior, Bureau of Reclamation (Reclamation) facility on this portion of the river. LCR operations are determined by various laws, treaties, and court decisions collectively referred to as *The Law of the River* (see Appendix A). The Law of the River includes, but is not limited to, the Colorado River Compact of 1922, the Boulder Canyon Project Act of 1928 (BCPA),

¹ As defined in the Colorado River Compact of 1922, the phrase *Lower Basin* describes the geographic area where waters naturally drain in the Colorado River below Lee Ferry, approximately 1 mile downstream from the confluence of the Paria River (the Lower Basin includes portions of Arizona, California, and Nevada); *Upper Basin* describes the area upstream of the Paria River (the Upper Basin includes portions of Arizona, Colorado, New Mexico, Utah, and Wyoming). As defined in the Colorado River Compact of 1922, the phrase *Lower Division States* (or *Lower Division*) used in this document refers to Arizona, California, and Nevada, and *Upper Division States* (or *Upper Division*) refers to Colorado, New Mexico, Utah, and Wyoming.

the California Seven Party Agreement of 1931, the *Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande—Treaty between the United States of America and Mexico*, dated February 3, 1944 (1944 Water Treaty), the Upper Colorado River Basin Compact of 1948, the 1956 Colorado River Storage Project Act, the Supreme Court Decree of 1964 in *Arizona v. California* (376 U.S. 340) (Decree), and the Colorado River Basin Project Act of 1968 (CRBPA). The Law of the River encompasses discretionary and nondiscretionary actions by Reclamation, acting for the Secretary of the Interior (Secretary) in her role as watermaster, related to its operation and maintenance (O&M) of the LCR. These activities are described in Chapter 2, “Description of Federal Actions (Covered Actions)” and Appendix J, “Technical Documentation of Ongoing and Future Operations.”

The Bureau of Indian Affairs (BIA), National Park Service (NPS), U.S. Fish and Wildlife Service (USFWS), Bureau of Land Management (BLM), and Western Area Power Administration (Western) have their own authorizing legislation and responsibilities for various reaches and resources of the LCR. The BIA, NPS, BLM, Western, and the USFWS have identified actions for coverage pursuant to the LCR MSCP that are discussed in Chapter 2, “Description of Federal Actions (Covered Actions).”

In 1967, the Yuma clapper rail, an endemic bird of the LCR, was listed as endangered under the precursor to the Federal Endangered Species Act (ESA). In 1980, the bonytail, a native fish of the LCR, was listed as endangered under the ESA. In 1991, the razorback sucker, a native fish of the LCR, was listed as endangered. In 1994, areas of the LCR were designated as critical habitat for these two endangered fish species. In 1995, the southwestern willow flycatcher, a native bird of the LCR region, was listed as endangered. The USFWS proposed critical habitat for the southwestern willow flycatcher including areas in the LCR MSCP planning area on October 12, 2004.

In 1995, U.S. Department of the Interior agencies; water, power, and wildlife resources agencies from Arizona, California, and Nevada; Native American tribes; environmental interests; and recreational interests agreed to form a partnership to develop and implement a long-term endangered species compliance and management program for the historical floodplain of the LCR. To facilitate the development of an ecosystem-based habitat conservation plan (HCP) and coordination with the various Lower Colorado River Multi-Species Conservation Program (LCR MSCP) Federal partners, the Director of the USFWS designated the LCR MSCP Steering Committee as the Ecosystem Conservation Recovery Implementation Team for the LCR. The parties designated the program the LCR MSCP. The potentially affected parties and other interested parties established a public process for developing the required documents and plans. Various public agencies and other nongovernmental groups have participated, at their discretion and at various times, in developing the various components of the LCR MSCP.

Reclamation issued a final biological assessment (BA) for LCR O&M from Lake Mead to the SIB in August 1996 (Bureau of Reclamation 1996). That BA served two purposes: as documentation for the ESA section 7 consultation between Reclamation and the USFWS for discretionary operations of the LCR and as a reference for development and implementation of the LCR MSCP by LCR stakeholders pursuant to ESA section 7 (for Federal actions) and ESA section 10(a)(1)(B) (for non-Federal actions). On April 30, 1997, the USFWS issued its final biological opinion (BO) (U.S. Fish and Wildlife Service 1997) (1997 BO). The 1997 BO identified Reclamation’s participation in



Figure I-1
Lower Colorado River MSCP
Planning Area and River Reaches

developing the LCR MSCP as the long-term plan to address the impacts of Reclamation's continued O&M activities on the LCR. Consultation on the 1997 BO was reinitiated at Reclamation's request in March 2002, and another BO was issued by the USFWS in April 2002 (U.S. Fish and Wildlife Service 2002a) (2002 BO). This BO identified minor modifications to the provisions of the 1997 BO and extended ESA coverage for Reclamation's discretionary actions on the LCR for 3 years to April 30, 2005.

LCR MSCP participants and stakeholders now seek to establish a long-term framework for compliance with the ESA for ongoing, proposed, and potential future projects. At present, compliance with ESA is achieved on a project-by-project and species-by-species basis. The LCR MSCP is a partnership responding to the need to balance the legal use of LCR water resources and the conservation of threatened and endangered species and their habitats in compliance with the ESA. The Steering Committee will operate, as defined under the Funding and Management Agreement (FMA) that has been prepared among Federal, state, local, and tribal parties, and will provide oversight to the LCR MSCP Program Manager (see LCR MSCP HCP Exhibit A). The LCR MSCP Program Manager is the position to be established by Reclamation, as described in the FMA, that will be responsible for implementing the LCR MSCP.

1.2 LCR MSCP Goal

The overall goal of the LCR MSCP is to develop and implement a plan that will:

- conserve habitat and work toward the recovery of threatened and endangered species, as well as reduce the likelihood of additional species being listed;
- accommodate present water diversions and power production and optimize opportunities for future water and power development, to the extent consistent with the law; and
- provide the basis for incidental take authorizations.

1.3 Purpose and Need for the LCR MSCP BA and Regulatory Context

1.3.1 Need for the LCR MSCP BA

Section 7(a)(2) of the ESA requires that Federal agencies consult with the USFWS to ensure that any action authorized, funded, or carried out by a Federal agency is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitat. To facilitate compliance with section 7(a)(2), Federal agencies prepare a BA, pursuant to section 7(c)(1), that identifies the likely effects of the Federal action on threatened and endangered species. Section 7 and its implementing regulations apply to all Federal agency actions in which there is discretionary Federal involvement or control (50 Code of Federal Regulations [C.F.R.] §402.03) Contents of a BA are at the discretion of the

Federal action agencies (50 C.F.R. §402.12(f)). Under Title 50 C.F.R. Part 402.14(c), a request for formal consultation will include information in these basic areas:

- description of the action undergoing consultation,
- description of the area that may be affected by the action,
- description of ESA-listed species and designated critical habitat,
- description of the manner in which the action may affect (either directly or indirectly) any listed species or designated critical habitat and an analysis of any cumulative effects, and
- relevant reports, including literature and communications with experts.

The LCR MSCP BA is intended to meet all of the regulatory requirements necessary for the USFWS to prepare a BO under section 7(b) of the ESA, including an incidental take statement for threatened and endangered species affected by specified Federal agency actions (covered actions) within the LCR MSCP planning area (see description of the LCR MSCP planning area under Section 1.4.1, “Geographic Scope,” and Chapter 2, “Description of Federal Actions (Covered Actions)”). The Federal action area is defined as “...all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action” (50 C.F.R. §402.02). Based upon the effects analysis presented in Chapter 5 of the LCR MSCP BA, the LCR MSCP planning area is the Federal action area addressed in the LCR MSCP BA. This LCR MSCP BA serves as an assessment of effects for the covered activities taken by Reclamation, Western, the NPS, the BIA, the USFWS, and the BLM as described in Chapter 2. The LCR MSCP BA also provides information that, along with the LCR MSCP HCP and other supporting documents, will be used by USFWS for its intra-Service section 7 consultation on the issuance of a section 10(a)(1)(B) incidental take permit to non-Federal applicants (see Table 1-1) for non-Federal covered activities that are addressed in the LCR MSCP HCP (see Chapter 3).

The LCR MSCP Conservation Plan, as described in Chapter 5 of the companion LCR MSCP HCP, provides measures to avoid, minimize, and mitigate the effects of the potential impacts of the federal covered actions and the non-federal covered activities on listed and other covered species and their habitat and to ensure that incidental take (take) of listed species will not jeopardize their continued existence (i.e., not reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild) or adversely modify designated critical habitat.

Table 1-1. Endangered Species Act Section 10(a)(1)(B) Permit Applicants Covered under the LCR MSCP

Permit Applicants² Covered under the LCR MSCP

Arizona

Arizona Department of Water Resources
 Arizona Game & Fish Department
 Arizona Power Authority
 Central Arizona Water Conservation District
 Mohave County Water Authority
 North Gila Valley Irrigation and Drainage District
 Salt River Project Agricultural Improvement and Power District
 Wellton-Mohawk Irrigation and Drainage District
 Yuma County Water Users Association
 Yuma Mesa Irrigation and Drainage District
 Yuma Irrigation District

California

Bard Water District
 Coachella Valley Water District
 Colorado River Board of California
 Imperial Irrigation District
 The Metropolitan Water District of Southern California
 Palo Verde Irrigation District
 San Diego County Water Authority
 Southern California Public Power Authority

Nevada

Basic Water Company
 Colorado River Commission of Nevada
 Nevada Department of Wildlife
 Southern Nevada Water Authority

² This list includes additional Applicants whose applications for an incidental take permit have been submitted to the USFWS since the publication of the draft LCR MSCP documents. Inclusion of additional Applicants has not added new covered activities or modified the scope of such covered activities. Accordingly, the effects of the covered activities of all such additional Applicants, for which take coverage is being sought, have been fully evaluated in both the draft and final versions of the LCR MSCP HCP and EIS.

1.3.2 Relationship between LCR MSCP BA and LCR MSCP HCP

Reclamation and the non-Federal LCR MSCP Applicants have prepared the LCR MSCP Conservation Plan (see Chapter 5 of the LCR MSCP HCP), which includes conservation measures for species and their habitats designed to achieve specific species goals for minimizing and mitigating impacts on species covered under the LCR MSCP BA. The non-Federal LCR MSCP Applicants have prepared the LCR MSCP HCP as a companion document to the LCR MSCP BA in compliance with section 10(a)(1)(B) of the ESA to cover non-Federal activities that could result in take of listed species.

The LCR MSCP Conservation Plan (see Chapter 5 of the LCR MSCP HCP) provides sufficient conservation of listed and other covered species to address all Federal covered actions described in Chapter 2 and all non-Federal covered activities described in Chapter 3. The LCR MSCP HCP includes the LCR MSCP Conservation Plan, which provides long-term mitigation to offset incidental take of listed threatened and endangered species resulting from actions, projects, or activities of the non-Federal resource users along the LCR (see Chapter 3).

The covered actions addressed in the LCR MSCP BA and covered activities addressed in the LCR MSCP HCP are divided into flow-related and non-flow-related activities. Although the effects on covered species of non-flow-related activities by non-Federal and Federal agencies could be distinguished and are addressed separately in the LCR MSCP HCP and LCR MSCP BA, as discussed more fully within this document, the effects on covered species of flow-related activities could not be distinguished between Federal and non-Federal components. Hence, both the LCR MSCP HCP and LCR MSCP BA address the same flow-related covered actions and activities.³ Many of the Federal actions on the LCR are nondiscretionary; see Section 2.1 for a discussion of the relationship between Federal discretionary actions, Federal nondiscretionary actions, and non-Federal covered activities.

The LCR MSCP Conservation Plan (LCR MSCP HCP Chapter 5) includes conservation measures for nonlisted species, thereby providing early protection for species not listed at the time the LCR MSCP BA was developed. In addition to conservation measures to avoid, minimize, and mitigate incidental take of listed species that may result from Federal and non-Federal covered activities, the LCR MSCP Conservation Plan includes conservation measures that will contribute to the recovery of listed species and reduce the likelihood for future listing of nonlisted covered species.

In summary, the LCR MSCP Conservation Plan, described in Chapter 5 of the LCR MSCP HCP, has been designed as a robust approach to covered species conservation that addresses all adverse effects on covered species that may result from any and all Federal covered actions and non-Federal covered activities described in Chapters 2 and 3 of this LCR MSCP BA and Chapter 2 of the companion LCR MSCP HCP.

³ Based on ESA compliance completed in January 2001, there is one distinction to the coverage addressed in the LCR MSCP HCP and the LCR MSCP BA related to proposed changes in points of diversion of LCR water. See discussion at Chapter 2, Table 2-13, and Section 5.2.

1.3.3 Relationship with 1997 and 2002 Biological Opinions

The LCR MSCP Steering Committee has overseen development of the LCR MSCP BA and LCR MSCP HCP to comply with ESA section 7 and section 10(a)(1)(B), respectively. With the approval of the LCR MSCP and issuance of the section 10(a)(1)(B) incidental take permit and section 7 BO in response to the LCR MSCP HCP and LCR MSCP BA, these new authorizations will supersede the 2002 BO. When the new BO for the LCR MSCP takes effect, the following obligations of Reclamation under the 1997 BO and 2002 BO will continue.

- If any of the 1,400 acres of southwestern willow flycatcher habitat acquired and protected under the provisions of the 1997 BO Reasonable and Prudent Alternative (RPA) 5 should lose its protected status in the future, the affected habitat acreage will be replaced by southwestern willow flycatcher habitat created under the LCR MSCP.
- Completion and ongoing maintenance of native fish impoundments by Reclamation that were a condition of the 1997 BO RPA 3, as amended by the 2002 BO, will be included under the LCR MSCP.

1.3.4 Relationship with 2001 Biological Opinion

In 2001, Reclamation and USFWS completed section 7 consultation regarding potential effects to Yuma clapper rail, southwestern willow flycatcher, bonytail, and razorback sucker from an annual change in point of diversion totaling 400,000 af and implementation of specific surplus guidelines through year 2016. The 2001 biological opinion will not be superseded by the LCR MSCP; however, as described in sections 4.3.1 and 5.2, the 400,000 af annual change in point of diversion is being included for coverage under the LCR MSCP as part of the total potential 1.574 million acre-feet per year (maf) change in points of diversion. Accordingly, the following conservation measures identified in the 2001 BO, when implemented by Reclamation in accordance with the requirements of the LCR MSCP HCP, will also be counted as LCR MSCP conservation measure requirements:

- funding and support for razorback sucker studies at Lake Mead beyond 2005;
- rearing and stocking of 20,000 razorback suckers between Parker and Imperial Dams (Reaches 4 and 5);
- restoration or creation of 44 acres of backwaters as habitat for native fish;
- \$50,000 in funding to provide for the capture of wild-born bonytail from Lake Mohave;
- monitoring of 372 acres of existing occupied southwestern willow flycatcher habitat; and restoration and maintenance of 372 acres of southwestern willow flycatcher habitat.

1.3.5 Relationship between the LCR MSCP BA and Other Federal and State Regulations

Federal and California agencies have prepared a joint LCR environmental impact statement/environmental impact report (EIS/EIR) in compliance with the:

- National Environmental Policy Act (NEPA) for issuance of the section 10(a)(1)(B) permit by the USFWS and implementation of the LCR MSCP by Reclamation and
- California Environmental Quality Act (CEQA) for implementation of the LCR MSCP by the California agencies.

The LCR MSCP provides ESA compliance for implementation of covered activities by non-Federal and Federal partners. Implementation of covered activities, however, may require compliance with other appropriate Federal and state laws and regulations, including, but not limited to, the Clean Water Act, Fish and Wildlife Coordination Act (FWCA), Migratory Bird Treaty Act (MBTA), NEPA, and CEQA (with respect to participating California agencies). Compliance with these laws and regulations may include mitigation in addition to that provided in the LCR MSCP.

1.3.6 Conservation Initiatives for the Colorado River

Over the past decade, significant species and habitat conservation initiatives have been developed throughout the Colorado River Basin. In the Upper Colorado River Basin, the U.S. Department of the Interior, Colorado, New Mexico, Utah, Wyoming, water users, power customers, and environmental groups developed recovery programs for several native endangered fish species (i.e., the Upper Colorado River Recovery Implementation Program and the San Juan River Recovery Implementation Program). The U.S. Department of the Interior is engaged in the Glen Canyon Adaptive Management Program, pursuant to the Grand Canyon Protection Act of 1992. This Act required the Secretary of the Interior to complete an environmental impact statement evaluating alternative operating criteria, consistent with existing law, that would determine how Glen Canyon Dam would be operated to both meet the purposes for which the dam was authorized and to meet the goals for protection of Glen Canyon National Recreation Area and Grand Canyon National Park. Local, state, and Federal interests in the Las Vegas metropolitan region have completed and are presently implementing a regional multiple species habitat conservation plan (MSHCP) for the Mojave Desert in Clark County, Nevada, that addresses terrestrial species and habitats common to Clark County and the Lake Mead and Lake Mohave portions of the Colorado River. Binational efforts are underway to address species conservation and the ecological condition of the Colorado River and its delta in Mexico. Efforts by state and Federal agencies to restore native fish species to the river and the large reservoirs in the LCR have been ongoing since the early 1990s.

The National Fish and Wildlife Foundation's Partners in Flight program has resulted in the development of ecoregion-based bird conservation plans, primarily focused on the

management and conservation of the nation's neotropical migratory bird species. In the Partners in Flight plans developed for Arizona, California, and Nevada, recognition is given to the ecological value and importance of the LCR to neotropical migratory and resident bird species that rely on and use the associated aquatic, marsh, and riparian habitats.

1.4 Scope of the LCR MSCP BA

1.4.1 Geographic Scope

The LCR MSCP planning area comprises areas up to and including the full-pool elevations of Lakes Mead, Mohave, and Havasu and the historical floodplain of the Colorado River from Lake Mead to the SIB. The historical flood plain is defined as all lands that are or have been affected by the meandering or regulated flows of the Colorado River, which historically have been defined by the change in elevation that forms the adjoining uplands. The full-pool elevation of Lake Mead is defined by water surface elevation 1,229 feet National Geodetic Vertical Datum (NGVD). The full-pool elevation of Lake Mohave is defined by surface water elevation 647 feet NGVD. The full-pool elevation of Lake Havasu is defined by surface water elevation 450 feet NGVD. The full-pool elevation at Lake Mead is 8 feet above the spillway gates in the raised position. The full-pool elevations for Lakes Mohave and Havasu correspond to the top of their respective spillway gates (Bureau of Reclamation 1981).

For use in the analysis of impacts and conservation measures in this HCP, the LCR MSCP planning area is divided into discrete reaches:

- Reach 1—from Separation Canyon in the lower end of the Grand Canyon to Hoover Dam, including Lake Mead up to full-pool elevation;
- Reach 2—from Hoover Dam to Davis Dam (river mile [RM] 276), including Lake Mohave up to full-pool elevation;
- Reach 3—from Davis Dam (RM 276) to Parker Dam (RM 192.3), including Lake Havasu up to full-pool elevation;
- Reach 4—from Parker Dam (RM 192.3) to Adobe Ruin and Reclamation Cibola Gage (RM 87.3) at the lower end of Reclamation's maintenance Cibola Division;
- Reach 5—from Reclamation Cibola Gage (RM 87.3) to Imperial Dam (RM 49.2);
- Reach 6—from Imperial Dam (RM 49.2) to the Northerly International Boundary (NIB) (RM 23.1); and
- Reach 7—portion of the LCR from NIB (RM 23.1) to SIB (RM 0.0) within the United States.

Water surface elevation and river miles were determined from LCR Maps, Colorado River Frontwork & Levee System, Arizona-California (Bureau of Reclamation 1976). The LCR MSCP planning area and river reaches are shown on Figure 1-1. It should be

noted that the above-described LCR MSCP planning reaches do not fully correspond with Reclamation's maintenance divisions.

1.4.2 Covered and Evaluation Species

Species covered in this LCR MSCP BA are those species for which incidental take authorization may be required under the ESA over the 50-year term of the LCR MSCP. These species were identified based on an initial assessment of how implementing proposed Federal covered actions and conservation measures could affect listed species or species that could become listed during the term of the LCR MSCP.

Species presently listed as threatened or endangered under the ESA are part of the section 7 consultation initiated by this LCR MSCP BA. The Federal agencies request technical assistance from USFWS on species not presently listed under the ESA that are covered under this LCR MSCP BA. The LCR MSCP will implement conservation measures for these nonlisted covered species and thereby support ESA compliance for these species in the event that they become listed. Any nonlisted species that becomes listed during the term of the LCR MSCP and that may be affected by Federal covered activities identified in this LCR MSCP BA would likely require a review of the BO on the LCR MSCP to evaluate the effects of the covered activity on the species and the degree of conservation afforded by the LCR MSCP. Documentation, possibly in the form of an amendment to the BO with an incorporated Incidental Take Statement, would be needed before take could be authorized under section 7.

One hundred forty-nine special-status species with the potential to occur in the LCR MSCP planning area were evaluated for coverage in the LCR MSCP HCP and BA. The LCR MSCP Steering Committee developed, adopted, and applied two criteria for selecting covered species from among the special-status species considered. Species proposed for coverage are those that meet one of the following selection criteria:

- species that are listed or that are proposed or candidates for listing under the ESA or species that are protected under Arizona, California, or Nevada law that could be affected by covered activities and would require take authorization or
- species that could become listed during the term of the LCR MSCP under the ESA or species that could become protected under Arizona, California, or Nevada law that could be affected by covered activities and could require future take authorization. Factors considered to determine potential for future listing during the term of the LCR MSCP are:
 - ongoing or likely future destruction, modification, or curtailment of a species' habitat or range, of magnitude sufficient to warrant future listing;
 - the inadequacy of existing regulatory mechanisms to protect a species from ongoing decline, of sufficient magnitude that could warrant future listing; or
 - other natural or artificial factors that may affect a species' continued existence.

Based on the application of the selection criteria, 27 of the species considered are proposed for coverage under the ESA section 10(a)(1)(B) incidental take permit (see

Table 1-2). Of the 27 covered species, six are listed as threatened or endangered under the ESA and are part of the section 7 consultation initiated by this LCR MSCP BA.

In addition to the covered species, the LCR MSCP BA and HCP include four “evaluation species.” Evaluation species are species that could become listed in future years and that could be added to the covered species list during LCR MSCP implementation but for which sufficient information is not available at this time to determine their status in the LCR MSCP planning area, to assess the potential affects of covered activities, or to develop specific conservation measures. The LCR MSCP Conservation Plan (LCR MSCP HCP Chapter 5) includes research studies and pilot management studies for the evaluation species to determine their status in the LCR MSCP planning area and to determine appropriate conservation measures. None of the four evaluation species are presently protected under the ESA.

The LCR MSCP BA, in addition to covered and evaluation species, assesses effects of Federal covered activities on the bald eagle. Because the bald eagle is not a covered species, conservation measures are not included for the bald eagle in the LCR MSCP Conservation Plan. The bald eagle is addressed in the LCR MSCP BA because it winters in the LCR MSCP planning area and individuals may be affected by the Federal covered activities (see Section 5.7). Such effects are not expected to rise to the level of take and are not likely to adversely affect bald eagle as a species.

1.4.3 Covered Federal Actions and Non-Federal Activities⁴

This LCR MSCP BA analyzes the effects to covered species from covered actions conducted by Reclamation, Western, the NPS, the BIA, the USFWS, and the BLM under their authorities and implementation of the LCR MSCP Conservation Plan by Reclamation. The USFWS will use the LCR MSCP BA in the evaluation of the Federal covered actions. There is no requirement for the USFWS to have a BA for issuance of a section 10(a)(1)(B) permit. The LCR MSCP HCP and supporting documents provide information on the extent of take and the proposed mitigation that is used by the USFWS for its intra-Service section 7 consultation on the issuance of a section 10(a)(1)(B) permit for the non-Federal covered activities.

The LCR MSCP BA covers a range of activities that could result in incidental take of listed species by Federal agencies. The LCR MSCP BA covers Reclamation’s role in the following actions (see detailed descriptions in Chapter 2):

- ongoing flow-related covered actions, including:
 - flood control,
 - state apportionment and water contracts,

⁴ The LCR MSCP documents refer to Federal and non-Federal actions and activities assessed for coverage under the LCR MSCP. Any use of the term “activities” or the phrase “covered activities” in reference to the Federal actions addressed in this BA is synonymous with the term “action” as defined in the ESA and its implementing regulations.

- annual operations (normal, surplus, shortage, and unused apportionment),
 - daily operation,
 - electric power generation,
 - the Lower Colorado River Water Supply Project—California,
 - Decree accounting, and
 - 1944 Water Treaty deliveries;
 - future flow-related covered actions, including:
 - specific surplus and shortage guidelines,
 - flood release contracts, and
 - changes in storage and delivery of state entitlement waters through various administrative actions;
 - ongoing non-flow-related covered actions, including:
 - channel and facilities maintenance throughout the LCR MSCP planning area,
 - Operation, maintenance, and replacement (OM&R) of major Federal facilities and miscellaneous operation and maintenance,
 - facilities and other maintenance activities at the SIB,
 - backwater maintenance accomplished under past mitigation requirements and as cooperative conservation efforts with other parties, and
 - Limitrophe Division maintenance activities;
 - future non-flow-related covered actions, including:
 - Topock Marsh habitat improvements,
 - Laguna Reservoir restoration and enhancement,
 - maintenance of unprotected banklines,
 - proposed jetties, and
 - proposed stockpiles and access roads; and
 - implementation of the LCR MSCP Conservation Plan.
- For Western, the LCR MSCP BA covers operations related to electric power generation at Hoover, Davis, and Parker Dams (see detailed descriptions in Chapter 2).
- For the NPS, the LCR MSCP BA covers the following actions (see detailed descriptions in Chapter 2):
- riparian habitat restoration,
 - fishery management,
 - boating access, and
 - temporal and spatial diversion of Colorado River water rights.

Table 1-2. Proposed Covered and Evaluation Species under the LCR MSCP BA and their Status

Common and Scientific Name	Federal Status ¹	Arizona Status ²	California Status ³	Nevada Status ⁴	Selection Criteria ⁵
Threatened and Endangered Species					
Yuma clapper rail <i>Rallus longirostris yumanensis</i>	FE	ASC	CT/FP	–	1
Southwestern willow flycatcher <i>Empidonax traillii extimus</i>	FE	ASC	CE	–	1
Desert tortoise (Mojave population) <i>Gopherus agassizii</i>	FT	ASC	CT	NT	1
Bonytail <i>Gila elegans</i>	FE	ASC	CE	NE	1
Humpback chub <i>Gila cypha</i>	FE	ASC	–	–	1
Razorback sucker <i>Xyrauchen texanus</i>	FE	ASC	CE/FP	NE	1
Other Covered Species					
Western red bat <i>Lasiurus blossevillei</i>	–	ASC	–	–	2
Western yellow bat <i>Lasiurus xanthinus</i>	–	ASC	–	–	2
Desert pocket mouse <i>Chaetodipus penicillatus sobrinus</i>	–	–	–	–	2
Colorado River cotton rat <i>Sigmodon arizonae plenus</i>	–	–	CSC	–	2
Yuma hispid cotton rat <i>Sigmodon hispidus eremicus</i>	–	–	CSC	–	2
Western least bittern <i>Ixobrychus exilis hesperis</i>	–	ASC	CSC	–	2
California black rail <i>Laterallus jamaicensis coturniculus</i>	–	ASC	CT/FP	–	1
Yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	FC	ASC	CE	–	1
Elf owl <i>Micrathene whitneyi</i>	–	–	CE	NP	1
Gilded flicker <i>Colaptes chrysoides</i>	–	–	CE	–	1
Gila woodpecker <i>Melanerpes uropygialis</i>	–	–	CE	–	1
Vermilion flycatcher <i>Pyrocephalus rubinus</i>	–	–	CSC	–	2
Arizona Bell's vireo <i>Vireo bellii arizonae</i>	–	–	CE	–	1
Sonoran yellow warbler <i>Dendroica petechia sonorana</i>	–	–	CSC	–	2
Summer tanager <i>Piranga rubra</i>	–	–	CSC	–	2

Common and Scientific Name	Federal Status ¹	Arizona Status ²	California Status ³	Nevada Status ⁴	Selection Criteria ⁵
Flat-tailed horned lizard <i>Phrynosoma mcalli</i>	–	ASC	CSC	–	2
Relict leopard frog <i>Rana onca</i>	FC	ASC	–	NP	1
Flannelmouth sucker <i>Catostomus latipinnis</i>	–	ASC	–	–	2
MacNeill's sootywing skipper <i>Pholisora graciellae</i>	–	–	–	–	2
Sticky buckwheat <i>Eriogonum viscidulum</i>	–	–	–	NEP	1
Threecorner milkvetch <i>Astragalus geyeri</i> var. <i>triquetrus</i>	–	–	–	NEP	1
Evaluation Species					
California leaf-nosed bat <i>Macrotus californicus</i>	–	ASC	CSC	–	N/A
Pale Townsend's big-eared bat <i>Corynorhinus townsendii pallascens</i>	–	–	CSC	–	N/A
Colorado River toad <i>Bufo alvarius</i>	–	–	CSC	–	N/A
Lowland leopard frog <i>Rana yavapaiensis</i>	–	ASC	CSC	–	N/A
¹ Federal Status FE = Listed as endangered under the Federal Endangered Species Act ESA. FT = Listed as threatened under ESA. FC = Candidate for listing under ESA.					
² Arizona Status ASC = Arizona wildlife of special concern.					
³ California Status CE = Listed as endangered under the California Endangered Species Act (CESA). CT = Listed as threatened under CESA. FP = Fully protected under the California Fish and Game Code. CSC = California species of special concern.					
⁴ Nevada Status NE = Nevada endangered NT = Nevada threatened. NEP = Nevada critically endangered plant. NP = Nevada protected.					
⁵ Selection Criteria 1. Species that are listed or that are proposed or candidates for listing under the ESA or species that are protected under Arizona, California, or Nevada law that could be affected by covered activities and would require take authorization; 2. Species that could become listed during the term of the LCR MSCP under the ESA or species that could become protected under Arizona, California, or Nevada law that could be affected by covered activities and could require future take authorization. Factors considered to determine potential for future listing during the term of the LCR MSCP are: <ul style="list-style-type: none"> ongoing or likely future destruction, modification, or curtailment of a species' habitat or range of sufficient magnitude that could warrant future listing; the inadequacy of existing regulatory mechanisms to protect a species from ongoing decline of sufficient magnitude that could warrant future listing; or other natural or artificial factors that may affect a species' continued existence. 					
N/A = Not applicable.					

For the BIA, the LCR MSCP BA covers the following actions (see detailed descriptions in Chapter 2):

- ongoing activities, including:
 - irrigation system operation and maintenance,
 - water conservation practices,
 - riparian habitat rehabilitation and restoration,
 - wildland fire management,
 - woodland and shoreline maintenance project on the Chemehuevi Indian reservation, and
 - temporal and spatial diversion of Colorado River water rights; and
- future projects, including:
 - canal lining,
 - water conservation practices,
 - farmland development (including construction of irrigation systems),
 - riparian habitat rehabilitation and restoration,
 - Headgate Rock Dam O&M, and
 - wildland fire management.

For the USFWS, the BA covers (see detailed descriptions in Chapter 2) temporal and spatial diversion of Colorado River water rights, including surface flows and pumping for the Havasu, Cibola, Imperial, and Bill Williams River National Wildlife Refuges (NWRs).

For the BLM, this BA covers temporal and spatial diversion of Colorado River water rights (see detailed description in Chapter 2).

Detailed descriptions of the covered actions by Federal agencies are provided in Chapter 2 and Appendix J, “Technical Documentation of Ongoing and Future Operations,” and major facilities on the LCR are described in Appendix O. Detailed description of non-Federal covered activities conducted by Arizona, Nevada, and California to be authorized under the USFWS section 10(a)(1)(B) incidental take permit are provided in Chapter 3. The descriptions of Federal covered activities in this LCR MSCP BA include both discretionary and nondiscretionary actions. Nondiscretionary actions are those actions for which applicable provisions of the Law of the River and other applicable laws do not allow Federal agencies alternative decision-making authority. In addition to statutory provisions, court orders and injunctions may limit the discretion of Federal agencies. See Section 2.1 for a discussion of how Federal discretionary, Federal nondiscretionary, and non-Federal actions are addressed in this LCR MSCP BA.

The LCR MSCP is intended by its Federal and non-Federal partners to be a robust and comprehensive species conservation program for activities that occur or may occur in the

LCR MSCP planning area (see Section 1.4.1, “Geographic Scope”) for a 50-year period (see Section 1.4.4, “Temporal Scope”). In an effort to make the LCR MSCP Conservation Plan as complete and effective as possible for the benefit of species covered by the LCR MSCP BA (see Section 1.4.2, “Covered and Evaluation Species”), the LCR MSCP partners have analyzed and provided conservation measures to address the effects of all Federal covered actions and non-Federal covered activities, including covered actions that are not within the discretionary control of the Federal participants (see Section 2.1). The LCR MSCP will provide long-term conservation to offset any incidental take of Federally listed threatened and endangered species through the actions and programs of the Federal and non-Federal agencies along the LCR. The LCR MSCP will implement conservation measures for species not presently listed as threatened or endangered under the ESA and thereby support ESA compliance for these species in the event that they become listed. In addition to conservation measures that address impacts on covered species in the LCR MSCP planning area, the LCR MSCP will implement conservation measures that are expected to contribute to the recovery of listed species and reduce the likelihood for future listing of species not presently listed.

1.4.4 Temporal Scope

The goal of the LCR MSCP is to provide long-term ESA compliance for the next 50 years for covered actions and activities conducted by Federal and non-Federal LCR MSCP participants. The Federal lead agencies are requesting a BO from the USFWS with a 50-year term for all covered Federal covered actions and all ESA-listed species addressed in this LCR MSCP BA.

1.5 Overview of LCR MSCP Planning Process

1.5.1 LCR MSCP Organization

The LCR MSCP has involved and will continue to involve many participating entities. The LCR MSCP Steering Committee has been responsible for the preparation of the documents that establish and define the LCR MSCP and provide compliance with environmental laws and regulations.⁵ LCR MSCP participants are agencies and other entities (including Steering Committee members) that have participated in the process of LCR MSCP development, providing input to the Steering Committee. The Permit Applicants (Applicants) (see Table 1-1) are those non-Federal entities requesting section 10(a)(1)(B) incidental take permits from USFWS for the species and activities covered in the LCR MSCP HCP. Following completion of the section 7 consultation and issuance of the section 10(a)(1)(B) permit, the Steering Committee will continue to operate, as defined under the FMA (see Exhibit A to the final LCR MSCP HCP) and will coordinate with the LCR MSCP Program Manager (Program Manager). The LCR MSCP Program Manager is the position to be established by Reclamation, as described in the FMA, that will be responsible for implementing the LCR MSCP.

⁵ See discussion of LCR MSCP in *Southwest Center for Biodiversity v. U.S. Bureau of Reclamation*, 143 F.3d 515, 519 n.1 (9th Cir. 1998).

1.5.2 Coordination with Agencies, Tribes, and Stakeholders and Public Involvement

This section provides a summary of the opportunities provided by the LCR MSCP for coordination with Federal and state agencies and other stakeholders and to solicit public involvement.

Since its formal inception in 1995, the LCR MSCP has encouraged and provided extensive opportunities for public participation in the development of the LCR MSCP Conservation Plan, HCP, and BA. At least 28 Federal, state, and local public agencies have participated in the LCR MSCP development process. Six Tribes with Tribal lands within the LCR MSCP planning area (Hualapai, Fort Mojave, Chemehuevi, Colorado River Indian Tribes [CRIT], Fort Yuma Quechan, and Cocopah) have participated in the process, including government-to-government meetings with Reclamation and USFWS. Meetings between Reclamation, the USFWS, and State representatives and Tribal leaders have been conducted with all six Tribes. In addition to public agencies and Tribes, private interest groups and individuals have been involved at their discretion in development of the LCR MSCP BA and HCP, including groups representing recreational and environmental interests.

The LCR MSCP Steering Committee and its various subcommittees have met frequently in public places, mostly in Las Vegas (Nevada), Phoenix (Arizona), and Ontario (California). Since 1998, an average of 32 meetings of the Steering Committee and subcommittees have been held per year (nearly three meetings per month). The purpose of these meetings was to develop and provide guidance for development of the LCR MSCP and its supporting documents, including:

- identifying the LCR MSCP program and biological goals;
- the scope of the LCR MSCP (i.e., LCR MSCP covered activities, covered species, geographic scope, and conservation commitments); and
- a framework for implementing the LCR MSCP, including commitments of the LCR MSCP participants to funding and implementing the LCR MSCP Conservation Plan.

Since 1998, the LCR MSCP has operated a public web site at www.lcrmscp.org. The web site has been regularly maintained and includes:

- a summary of the program,
- contact information of LCR MSCP participants,
- schedule of upcoming meetings,
- meeting notes from past meetings, and
- links to related news items and web pages.

Through the LCR MSCP web site, relevant steps, decisions, and documents in the development of the LCR MSCP HCP have been made available to the public. In addition to the LCR MSCP web site, Reclamation's Lower Colorado Regional Office maintains a web site at www.usbr.gov/lc/region/g2000/mscp. Reclamation's web site includes

documents relevant to the joint NEPA/CEQA process and particularly the public scoping process.

In 1999, Reclamation, the USFWS, and the Metropolitan Water District of Southern California (Metropolitan) prepared a public involvement plan (PIP) for the LCR MSCP that was reviewed by the LCR MSCP participants and made available on Reclamation's Lower Colorado Region web page. The PIP identified key issues and public outreach initiatives and addressed the process for scoping for the NEPA and CEQA compliance and responding to comments on public draft and final LCR MSCP EIS/EIR documents.

The LCR MSCP maintains an extensive mailing list for both email and postal delivery. Most LCR MSCP products have been emailed for review and comment to more than 80 individuals representing a wide range of Federal, state, and local agencies and private interest groups. In addition, preliminary draft and draft documents have been put on compact discs (CDs) and mailed on request.

As part of the joint NEPA/CEQA process, a notice of intent/notice of preparation to prepare the LCR MSCP EIS/EIR was published in the Federal Register (FR) in May 1999 (64 FR 95:27000–27002, May 18, 1999) and a supplemental notice of intent/notice of preparation was published in July 2000 (65 FR 194:43031–43034, July 12, 2000). Public scoping meetings were held in 1999, 2000, and 2003. Seven public meetings were held in June–July 1999 at Lake Havasu City, Arizona; Laughlin, Nevada; Henderson, Nevada; Yuma, Arizona; Phoenix, Arizona; Blythe, California; and Ontario, California. Four public meetings were held in July–August 2000 at Yuma, Arizona; Blythe, California; Henderson, Nevada; and Laughlin, Nevada. Three scoping meetings were held in November 2003 in Yuma, Arizona; Blythe, California; and Laughlin, Nevada. Newsletters and news releases were distributed prior to the 1999 and 2000 scoping meetings, and news releases were distributed prior to the 2003 meetings.

On June 18, 2004, the U.S. Department of the Interior, provided notice in the Federal Register of the availability of draft documents regarding the LCR MSCP for public review and comment. (See 69 FR 34185–34187.) Approximately 360 copies of the Draft LCR MSCP EIS/EIR, HCP, and BA were distributed to agencies, public libraries, Indian tribes, organizations, and individuals for review during a 60-day period ending on August 18, 2004. Additionally, three public hearings were held in Henderson, Nevada; Blythe, California; and Phoenix, Arizona on July 20–22, 2004 to receive public comments on the Draft EIS/EIR.

Coordination with public agencies and tribes and public outreach have been key elements in the development of the LCR MSCP HCP and BA and will continue to be key elements in implementation of the LCR MSCP.

1.5.3 Coordination with Science Review Panels

In addition to frequent meetings of the LCR MSCP Biological Subcommittee, the LCR MSCP engaged in independent peer review during development of the LCR MSCP Conservation Plan on two separate occasions. An early scientific peer review was conducted by a panel assembled by the Scientific Peer Advisory and Review Services

Division of the American Institute of Biological Sciences in 1999. The second scientific peer review was conducted by a panel assembled by M3 Research in 2002 and completed in 2003. The results of the 1999 and 2002–2003 scientific peer review processes are described in Chapter 8, “Experts Contacted and Peer Review Process.”

1.6 Document Organization

The Final LCR MSCP documents comprise five volumes:

- Volume I: *Environmental Impact Statement/Environmental Impact Report*;
- Volume II: *Habitat Conservation Plan*;
- Volume III: *Biological Assessment*;
- Volume IV: *Appendices to Volumes I–III and V*, Table 1-3 lists the appendices and indicates which ones are referenced in Volumes I–III; and
- Volume V: *Responses to Comments on LCR MSCP Volumes I–IV*.

The LCR MSCP BA provides all information required by the ESA section 7 and USFWS section 7 regulations (50 C.F.R. Part 402). Below is a summary of the contents of each chapter of this LCR MSCP BA.

- Chapter 2, “Description of Federal Actions (Covered Actions),” describes the Federal actions covered under this consultation.
- Chapter 3, “Non-Federal Covered Activities: Ongoing and Future,” describes the specific non-Federal activities covered under the LCR MSCP.
- Chapter 4, “Environmental Baseline and Resources of the LCR,” describes the environmental baseline, including the historical and existing river ecosystem and vegetation of the LCR relevant to the species covered in the LCR MSCP BA and the approach to assessing habitat for each of the covered species.
- Chapter 5, “Effects of the Covered Activities,” contains the analysis of effects on covered species expected to result from covered actions, including implementation of the LCR MSCP Conservation Plan.
- Chapter 6, “Cumulative Effects,” describes the cumulative effects of non-Federal activities within the LCR MSCP planning area.
- Chapter 7, “Summary of Effects Analysis,” provides a summary of the effects on covered species.
- Chapter 8, “Experts Contacted and Peer Review Process,” provides a list of names of species experts contacted during the development of the LCR MSCP and LCR MSCP BA and a summary of the results of the peer review process.
- Chapter 9, “References,” lists the references and personal communications cited in the LCR MSCP HCP.

1 **Table 1-3.** List of Appendices to LCR MSCP Volumes I–III and V (Volume IV)

Appendix	Referenced in Volume I, LCR MSCP EIS/EIR	Referenced in Volume II, LCR MSCP HCP	Referenced in Volume III, LCR MSCP BA
A The Law of the River	X	X	X
B Notices of LCR MSCP EIS/EIR Preparation	X		
C LCR MSCP Scoping Summary Reports	X		
D Non-Covered Sensitive Species Potentially Present in the Planning Area and Off-Site Conservation Areas	X		
E Additional Background Information on the Bureau of Reclamation's Cultural Resource Identification Effort	X		
F EIS Disclosure Statement Concerning the Preparation of an EIS/EIR for the Lower Colorado River Multi-Species Habitat Conservation Plan	X		
G Covered Colorado River Water Contracts		X	X
H Summary of Land Cover Types by River Reach and Landowner		X	X
I Status of LCR MSCP Covered Species	X	X	X
J Technical Documentation of Ongoing and Future Operations		X	X
K Hydrologic Depletion Analysis of the Effects of Changes in Points of Diversion on Water Elevations and Land Cover Types		X	X
L Reach 7 Effects		X	X
M Effects of LCR MSCP Flow-Related Activities on Lake Mead		X	X
N Detailed Implementation Cost Estimate Assumptions		X	
O Major Facilities on the Lower Colorado River			X
P Field Working Agreement between Department of the Interior, Bureau of Reclamation, and Department of the Army, Corps of Engineers for Flood Control Operation of Hoover Dam and Lake Mead			X
Q Compilation of Records in Accordance with Article V of the Decree of the Supreme Court of the United States in <i>Arizona v. California</i> dated March 9, 1964			X
R History of River Work and Maintenance			X
S Relevant Sections of Western Area Power Administration's and Bureau of Reclamation's Joint Operating Agreement and Master Agreement			X

Appendix	Referenced in Volume I, LCR MSCP EIS/EIR	Referenced in Volume II, LCR MSCP HCP	Referenced in Volume III, LCR MSCP BA
T List of Common Names and Scientific Names for Plants and Wildlife Mentioned in the LCR MSCP HCP and BA		X	X
U Acronyms and Abbreviations Used in the LCR MSCP HCP and BA		X	X
V Glossary of Terms Used in the LCR MSCP HCP and BA		X	X

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